

A quick guide for strategic managers on weather and flood information

This quick guide is aimed at helping strategic managers understand weather and flood information available to them if they are involved with incident response. For the purposes of this quick guide we are assuming you are dealing with a situation where severe impacts are being forecast.

The three key products covered are:

1. National Severe Weather Warning Service from the Met Office;
2. Flood Guidance Statement from the Flood Forecasting Centre;
3. Flood Warnings from the Environment Agency and Natural Resources Wales.

National Severe Weather Warning Service (NSWWS)

- Weather warnings are produced by the Met Office as part of the NSWWS and cover all main weather types: rain, snow, ice, wind and fog.
- Warnings are provided for the UK at a county level. They are available to the public and all Category 1 and 2 responders and provide a daily overview and guidance, with additional local maps over a 5 day period.
- Weather warnings allow Category 1 and 2 responders to prepare themselves and their services to withstand the impacts of severe weather and put themselves in a position of readiness to support communities at risk.
- Warnings use both likelihood (chance) and impact (consequence) to assess weather conditions, presented in a 4x4 box risk matrix and on maps.
- Strategic managers are likely to be facing situations where high impacts (i.e. risk to life, properties and infrastructure) are forecast in counties which are coloured yellow (low), amber (medium) or red (high) to reflect the risk level.
- Any risk assessment comes with uncertainty, particularly at longer lead times. Discussing and understanding this uncertainty is a key part of decision making for strategic managers. Some key areas to explore in discussion are: timings of weather events, certainty of location, certainty of impacts, and co-incidence with other weather events.

Flood Guidance Statement (FGS)

- The FGS is produced by the Flood Forecasting Centre, a joint venture between the Met Office and Environment Agency. It covers all sources of natural flooding: coastal/tidal, river, surface water and groundwater. These can occur in combination which is a common feature of severe floods.
- The FGS covers England and Wales at county level. It is available to all Category 1 and 2 responders and presents an overview of developing flood risk for five days, sitting between the NSWWS and local flood warnings for communities provided by the Environment Agency and Natural Resources Wales. The FGS is publicly available only as a summary three day forecast.
- The FGS allows Category 1 and 2 responders to anticipate and plan their response to developing flood situations, for example, deployment of teams and strategically moving equipment around parts of the country.
- Both the NSWWS and FGS share the same 4 x 4 box risk matrix and risk levels. Note that impacts are labelled minor, moderate, significant and severe for the FGS.
- Strategic managers are likely to be facing flooding with potentially severe impacts (i.e. risk to life, properties, and infrastructure) where the FGS will show counties coloured yellow (low), amber (medium) or red (high) to reflect the risk level.

- As with the NSWWS, the FGS risk assessment comes with uncertainty, particularly at longer lead times. Discussing and understanding this uncertainty is a key part of decision making for strategic managers. Some key areas to explore in discussion are: uncertainty in the weather forecast driving the flooding, certainty on locations and timings, and certainty on impacts.

Flood Warnings

- Flood warnings are issued by phone and electronic messaging by the Environment Agency and Natural Resources Wales to warn people and properties at risk from either rivers or the sea. In some limited locations warnings for groundwater flooding are also provided.
- There are three types of warning. Strategic managers are less likely to be involved in Flood Alerts and more involved in situations where Flood Warnings and Severe Flood Warnings are issued:
 - **Flood Warnings** warn people of expected flooding and encourage them to take action to protect themselves and their property.
 - **Severe Flood Warnings** warn people of severe flooding and danger to life and encourage them to take action to protect themselves and follow the advice of the emergency services. While the decision to issue a Severe Flood Warning rests with the Environment Agency or Natural Resources Wales, if the lead time allows, the situation will be discussed with other strategic managers at Strategic Co-ordinating Groups.
- Unlike the NSWWS and FGS, Flood Warnings and Severe Flood Warnings are issued at higher likelihoods and are informed by detailed local site information.
- The Environment Agency and Natural Resources Wales produce detailed maps of areas at flood risk from rivers and the sea, and have produced similar maps of areas affected by surface water flooding for use by Lead Local Flood Authorities. Latest river and sea levels are available via the Environment Agency's website (and the Natural Resources Wales website from 1 April 2013).

Additional Information

More detailed User Guides are available within the Joint Responder Training pack:

- National Severe Weather Warnings (Met Office)
- Flood Guidance Statement (Flood Forecasting Centre)
- Flood Warning Codes (Environment Agency and Natural Resources Wales)

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